

REMARKS

This is intended as a full and complete response to the Office Action dated November 10, 2003, having a shortened statutory period for response set to expire on February 10, 2004. Please reconsider the claims pending in the application for reasons discussed below.

In the specification, the paragraph [0005] has been amended to correct a minor editorial problem. No new matter has been added.

Claims 1-9, 24-26 remain pending in the application after entry of this response. Claim 8 has been amended and new claims 24-26 have been added. No new matter has been added. Claims 1-9 are rejected. Reconsideration of the rejected claims is requested for reasons presented below.

Claim 8 stands rejected under 35 USC 112, second paragraph. Claim 8 has been amended to overcome this rejection. Withdrawal of the rejection is respectfully requested.

Claims 1-9 stand rejected under 35 USC 101 because the Examiner states that the disclosed invention is inoperative and therefore lacks utility. The Examiner wrote, "*Hermanson* [U.S. Patent No. 5,334,268] ... concludes that 'owing to the hardness' a different procedure is required wherein the threads are first cut prior to cold working ... Therefore, in view of *Hermanson's* disclosure, the instant invention would be inoperative because ... the threads could not be fully cold formed." Applicants respectfully traverse this rejection.

Specifically, *Hermanson* discloses "However, because the ultimate tensile strength of the core 12, in accordance with the present invention, is substantially greater than about 100,000 psi, the core 12 is simply too hard for a pure cold working operation to form the threads 20 therein." (See *Hermanson*, col. 5, lines 16-20.) This statement and the one cited by the Examiner are potentially misleading. Applicants assert that the point at which the core would be too hard to fully cold form the threads would be for a tensile strength greater than about 150,000 psi and/or a hardness greater than about 40 HRC. Withdrawal of the rejection is respectfully requested.

Claims 1-8 stand rejected under 35 USC 102(b) as being anticipated by *Hermanson* (U.S. Patent No. 5,334,268). In the rejection, the Examiner wrote: "The threads being fully cold formed by rolling ... are product-by-process limitations wherein only the final product is considered for patentability." Applicants respectfully traverse the rejection.

"The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. *See, e.g., In re Garner*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding 'interbonded by interfusion' to limit structure of the claimed composite and noting that terms such as 'welded,' 'intermixed,' 'ground in place,' 'press fitted,' and 'etched' are capable of construction as structural limitations.)" (See MPEP, § 2113.)

Hermanson does not disclose a coupling, comprising "a hollow, cylindrical coupling blank fabricated of hardenable metal ... and fully cold formed threads on an inner surface of said coupling blank" as recited in claim 1. *Hermanson* does mention fully cold formed threads on a coupling, but not when the blank is fabricated of hardenable material. In the case of a hardenable blank, *Hermanson* discloses partially cutting the threads with an existing tap before cold working. This yields a coupling with inferior fatigue properties, i.e., reduced compressive residual stresses at the threads. (See Application, paras. [0009], [0014], and [0020].) The superior fatigue properties of the *product* (the coupling) are distinctive structural characteristics imparted by the phrase "fully cold formed threads" as recited in claim 1. Similarly, the phrase "hardenable metal", as recited in claim 1, also imparts a distinctive structural characteristic. Therefore, claim 1 is patentable over *Hermanson*. Claims 2-7 and new claims 24-26 are also patentable over *Hermanson* since they depend from claim 1.

Claim 9 stands rejected under 35 USC 103(a) as being unpatentable over *Hermanson* in view of *Rallis* (U.S. Patent No. 6,413,326). As noted above, *Hermanson* does not teach, suggest, or disclose a coupling, comprising "a hollow, cylindrical coupling blank fabricated of hardenable metal ... and fully cold formed threads on an

inner surface of said coupling blank” as recited in claim 1. *Rallis* does not teach, suggest, or disclose a coupling, comprising “a hollow, cylindrical coupling blank fabricated of hardenable metal ... and fully cold formed threads on an inner surface of said coupling blank” as recited in claim 1. *Hermanson* and *Rallis*, alone or in combination, do not teach or disclose all the limitations recited in claim 1. Therefore, claim 1 is patentable over *Hermanson* in view of *Rallis*. Claim 9 and new claims 24-26 are also patentable over *Hermanson* in view of *Rallis* since they depend from claim 1.

In addition, Applicants would like to point out that in the International Preliminary Examination Report (IPER) cited in the second supplementary information disclosure statement filed contemporaneously with this response, the Examiner there found claims 1-9 novel and inventive over U.S. Pat. No. 5,405,461 (a divisional of *Hermanson* with an identical specification). Applicants realize that this is in no way binding on the Examiner. Nevertheless, Applicants believe the IPER leads support to the Applicants’ response herein.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant’s disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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